NanoEnergy Van

TOYO'S NEW & IMPROVED LIGHT COMMERCIAL TYRE
The best solution for safety, fuel economy, ride

There’s a buzz of excitement running through the Toyo Tires network in Australia as the company gears up to launch the brand new NanoEnergy Van tyre range.

Delivery Magazine was invited to preview the release of the NanoEnergy Van tyre and experience at first-hand how this new range heralds a major redesign of tyres specifically for owners of vans, utes, people movers, motorhomes, caravans and trailers.

The increasing complexity of vehicle design demands tyres that complement the vehicle, enhancing the ride and handling capabilities but also able to provide longer life aligned with maximum safety and low road noise. As tyre design has kept pace with these demands, the improved compounds and manufacturing efficiencies have also resulted in lower rolling-resistance tyres that enhance fuel economy, improve cornering and steering control, reducing braking distances in emergency situations while promoting wet-weather sure-footedness.

Despite the major emphasis of car marketing being centred on styling and appearance, it’s the tyres on each corner of the vehicle that consolidate all the expectations of the driver relating to the personal safety of those in the vehicle and travelling near them.

The design of each tyre and the incorporation of low rolling-resistance Nano technology signals a strong upgrade in vehicle safety, ride quality, performance and handling, plus a significant reduction in fuel consumption.

It’s usually the vehicle manufacturers that gain all the credit for improved performance, safer and more efficient braking, plus better on-road handling and cornering. But the reality of vehicle behaviour always depends on the quality and efficiency of the tyre sitting on each corner of the vehicle.

Tyre pressures are also really important, with the right pressure playing its part in supporting the load the vehicle has to carry and linking that performance with providing the best handling, cornering, braking and steering experience for the driver.

Tyre technicians amass a huge amount of knowledge about their products, yet seldom does the buying public spend the time to discuss which tyre is best for a specific application, tending to prefer to be guided by price, rather than perception.

Low Rolling Resistance = Better Fuel Economy

<table>
<thead>
<tr>
<th>NanoEnergy Van</th>
<th>Index</th>
<th>29% lower</th>
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</thead>
<tbody>
<tr>
<td>TOYO H08</td>
<td>71</td>
<td>100</td>
</tr>
</tbody>
</table>

Test Condition
Tyre Size: 235/65R16C 115/113S (NanoEnergy Van)
Inflation Pressure: 475kPa
Load: 1033kgf
Location: Toyo Tires Technical Centre, Japan
Base on EU 1233/2017

Improved Wet Weather Braking = Improved Safety

<table>
<thead>
<tr>
<th>NanoEnergy Van</th>
<th>Index</th>
<th>10% shorter</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOYO H08</td>
<td>90</td>
<td>100</td>
</tr>
</tbody>
</table>

Test Condition
Tyre Size: 235/65R16C 115/113S (NanoEnergy Van)
Inflation Pressure: 300/475kPa
Vehicle: Mercedes Benz Sprinter
Location: Toyo Tires Miyazaki Proving Ground, Japan
Braking: 100km/h > 0km/h
NanoEnergy Van – Tread Design

TOYO H08

braking force

“NanoEnergy VAN – the specialist tyre for vans, utes, people movers, motorhomes, caravans and trailers”

Toyo Tires is one of the world’s leading Japanese tyre makers, and with the launch of the NanoEnergy Van tyre range the company is able to implement the latest technology for light-commercial application across a broad range of vehicles and trailers.

The NanoEnergy Van tyre builds on the reputation of its predecessors the Toyo HO8 as the ideal tyre for light-commercial vehicle use, providing excellent wet-weather traction, a long tread life, resistance to shoulder wear and high levels of ride comfort.

Steve Burke, Manager of Toyo Tires Australia’s technical department told Delivery Magazine that the square shoulder design of the NanoEnergy Van tyre minimises the effect of shoulder wear on actual tyre life. Other design features provide improved directional stability and contribute to a reduction in fuel consumption through achieving a lower rolling-resistance capability.

“We are seeing a reduction in rolling resistance of 29 percent and an improvement in wet-weather braking and stopping distance by a further 10 percent. The tread pattern contains sipes that have links inside the tread blocks to prevent tread pattern distortion, which is most effective during cornering and braking,” said Steve.

“The tread pattern of the NanoEnergy Van tyre is non-directional, meaning that tyre fitment is universal and is not sensitive to the direction of rotation. This can be a major benefit for operators, especially where dual tyres are specified for higher load weights.

“Toyos latest rubber compound with Nano Balance technology enables the tyre to feature a shallower tread depth that promotes great directional stability together with a reduction in tyre squirm. The shallower tread depth also means the tyres generate less heat and run at lower temperatures.

The performance advantages achieved with the NanoEnergy Van tyre build on the proven reputation for longevity of its predecessor the Toyo HO8, while providing comparable speed and load ratings.

“The strength of the Toyo product range comes from providing a performance advantage through tailoring the strength of its tyre casing and the performance of its tread design to a specific application. The NanoEnergy Van tyre offers van users a genuine improvement in tyre life, performance and total operating costs,” added Steve.

The development of the NanoEnergy Van tyre is centred on safety, bringing new standards of wet weather handling and performance for fitment to 4x2 utes; small, medium and large vans; people movers; motorhomes; caravans; and trailers.
The burgeoning motorhome market is typical of the growth in the LCV sector, with the five years from 2015-2019 showing an 18 percent increase in vehicle registrations in the 3500-8000 kg market segment.

The technical sophistication of the latest large vans and motorhomes demands equal levels of performance and safety from the replacement tyre market. With 11 sizes available with 16-inch rims in this segment, Toyo now has a suitable 65 or 75-aspect ratio *NanoEnergy Van* tyre available in popular sizes to suit the Fiat Ducato, Mercedes-Benz Sprinter, VW Crafter and Ford Transit.

“There are considerable cost benefits in fitting premium replacement tyres when it comes to overall total operating costs,” said Steve Burke.

“In addition to the improved wet-weather handling, better cornering, shorter braking distances and more sure-footed steering control, the estimated road life of a premium tyre outweighs cheaper substitutes, keeping drivers and other road users safer.

“A budget brand may have a lower initial purchase price, but the actual cost to the vehicle operator through its service life is usually substantially higher, plus the safety it provides is to a lower standard. Low rolling resistance is another factor in fuel economy, with gains available that represent up to 0.6 l/100kms through the life of the tyre.

“The wider shoulder rib and double zig-zag groove of the *NanoEnergy Van* tread design uses Toyo’s latest technologies to minimise flexing and tread-block movement. This ensures more even contact pressure distribution, again enhancing safety, steering and braking efficiency.

“In testing prior to the release of the *NanoEnergy Van* tyre engineers found the tyre design contributed to a reduction in overall wet-weather braking distance of 10 percent in a typical evaluation using a Mercedes-Benz Sprinter fitted with 235/65R16 *NanoEnergy Van* tyres. Other recorded data showed a reduction in rolling resistance co-efficient of 29 percent,” added Steve Burke.

The complexity of the tyre market results in such a diverse range of tyre sizes that the chances of a local tyre dealership holding stock of a wide enough selection of tyres to satisfy all requests from within the store are by nature sometimes minimal.

The next best solution for tyre dealerships is to establish rapid delivery of stock on a daily or twice-daily basis, ensuring the customer receives the right product within an acceptable timeframe to ensure prompt customer service.
higher performing tyres

“NanoEnergy Van tyres for improved directional stability and longer life”
Buffalo Freight Management distributes for Toyo Tires in addition to supplying other brands, and with its fleet of 90 delivery vehicles across all States and Territories it provides a twice-daily response where possible to Toyo Tires’ metro stockists.

Ryan McKinnon, founder and director of Buffalo Freight Management, has participated in early Australian trials of the new NanoEnergy Van tyres and is impressed by the obvious gains in safety and performance experienced by his drivers.

“The quality of manufacture from the NanoEnergy Van tyres, which are made in Japan, is certainly world class and our drivers have commented on the noticeable benefits of better handling, quieter noise levels and even the reduction in fuel consumption.

“When you are constantly delivering tyres to distributors across Australia you soon get to know which products work better than others.

“NanoEnergy Van tyres improve wet weather braking and stopping distance by 10 percent”

“In our own evaluations using two of our Mercedes-Benz Sprinter vans, the 235/65R16 NanoEnergy Van tyre is projecting a life of 140,000 km, an improvement of over 20,000 km when compared to previous operating durability and longevity. The improvement in wet-weather grip was also commented upon by the drivers concerned and we found fuel economy improved by 0.5 l/100km.

Distribution has already started for Toyo Tires of the 21 different NanoEnergy Van sizes that cover 14-inch, 15-inch, 16-inch and now 17-inch rim applications with aspect ratios and speed and load ratings that cover all the major tyre requirements.
In our last issue of Delivery Magazine, we commented on the need for LCV operators to adopt the maintenance protocols of their medium and heavy truck mates.

Total operating costs (TCO) need to be identified, tracked and controlled and those parameters cannot be assessed if the information isn’t available.

Whether a van or motorhome owner has one or 100 vehicles on fleet, there must be a workable tyre-maintenance programme in place that assesses tyre performance, records tread depth variation, monitors tyre pressures regularly and organises tyre rotation, balancing and wheel alignment to take place every 10,000 – 15,000 km.

Throughout this feature, we’ve repeatedly made mention of the need to keeping tyres running at cool temperatures. This is usually dependent on checking and maintaining the correct recommended tyre pressures. If the pressure is less than that required to carry the load (as indicated on the tyre placard attached to the vehicle), the tyre can overheat, and an eventual tyre failure can be the outcome.

A tyre maintenance programme is essential to ensure the health and safety of the driver as part of your workplace responsibilities. In a nutshell, unsafe tyres create unsafe working conditions for the driver and employees travelling in the vehicle.

Whilst we keep repeating that maintaining the correct tyre pressure extends tyre life, it’s also important to link that knowledge in with the ride and handling performance also being dependent on each tyre having the correct pressure.

There’s an anomaly here though because within each tyre, it’s the air that supports the load and the load weight can change the moment the cargo is delivered and the truck turns to head for home. Tyre pressures that are too low will increase rolling resistance and increase fuel consumption, adding to your TCO. They will also suffer from unnecessary wear, necessitating early replacement and again adding to your TCO.

Delegate your tyre duties to your local professionals and when the time comes for replacement, discuss the use of your LCV with them and buy your replacement tyres for the specific application and not just the lowest possible price.

“NanoEnergy Van tyres reduce rolling resistance by 29 percent”
move further.

with improved safety and fuel-saving performance in the

NANOENERGY VAN

toyotires.com.au

Make your move.